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Perspective

COVID-19, Pregnant Women and Their Hard-Wired Worry

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In our day to day obstetric practice we face a number of concerns raised by the pregnant women regarding their health. Some of the frequently asked queries include: if they would develop health problems like high blood pressure and/or diabetes; if they would have a normal delivery or would require an intervention in the form of cesarean section or instrumentation, if they would have the birth experience as they envision and if the stress is harmful during the ongoing pregnancy. Every pregnant woman strives her best to give birth to a healthy child. As every pregnancy is a period of uncertainties and risks, pregnant women are anxious about their well-being and that of their baby. The list of concerns are endless with the addition of corona virus disease (COVID-19).

If we look back into the past, viral infections such as influenza, H1N1, and Severe Acute Respiratory Syndrome (SARS) caused immense maternal and fetal complications during pregnancy. Due to compromised, pregnant women are more vulnerable to being infected.[1] SARS-CoV-2 is a new strain of corona virus that is similar to Middle East Respiratory Syndrome corona virus (MERS-CoV) and Severe Acute Respiratory Syndrome coronavirus (SARS-CoV). These viruses spread primarily by coughing and sneezing or direct contact. Most patients infected with any one of these three strains of corona virus may remain asymptomatic or may develop relatively mild symptoms such as fever, cough and fatigue. However, some may develop severe forms of the disease leading to pneumonia and respiratory failure; requiring oxygen or other respiratory support. Pregnant women infected with MERS-CoV or SARS-CoV were at high risk of developing severe pneumonia; heart failure and other complications which could be life threatening leading to death in many cases.[2]

Due to lack of meticulous evidences on the number of confirmed cases and further categorizing them based upon disease severity and other associated co-morbid conditions in Nepal, we can only presume the effects of COVID-19 as per the information gathered from other countries. Nevertheless, information on COVID-19 during pregnancy are promising; unlike the MERS-CoV or SARS-CoV infections.[3] However, there is a concern that pregnant women might be more prone to miscarriage, preterm birth and fetal growth restriction if they get infected with COVID-19.[4]

In Nepal, it is feared that COVID-19 peak is yet to be reached, as seen with other countries who were hit hard by the global pandemic. Most of the information we have are based on the reports of the sick patients or those that were believed to be at high risk for having infection with COVID-19 and many mild cases might still be undetected. In that setting, we might learn more about the worst outcomes before we learn about milder ones. The Centers for Disease Control and Prevention (CDC) has released Interim Clinical Guidance for Management of Patients with confirmed COVID-19, and guidance for evaluating and testing infected people. American College of Obstetricians and Gynecologists (ACOG) has developed COVID-19 frequently asked questions (FAQs) for Obstetrician-Gynecologists to supplement this practice advisory and provide additional information for clinicians on

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the frontline of the COVID-19 pandemic.[4]

It is still unclear if COVID-19 has a potential of vertical transmission. It is reported that the SARS-Cov-2 receptor shares the same receptor, Angiotensin Converting Enzyme (ACE2), with SARS-CoV.[5] Based on the single cell RNA-sequencing database, analysis of mRNA expression over maternal-fetal interface was done. The result showed ACE2 has very low expression in different cell types of maternal fetal interface except slightly high in decidual perivascular cell cluster.[5] This concludes that mother-to-fetus transmission will be significantly lower, which will help to avoid unnecessary panic among the general public. It is still unknown whether there are other receptors responsible for the SARS-CoV-2 infection, further studies are required in this matter. As the maternal secretions are likely to get in contact with the newborn during the process of delivery, vertical transmission cannot be totally denied.

It has been very challenging for pregnant women to receive health services during this pandemic. Visiting hospital for regular check-ups or other health issues and delivery during a pandemic can be petrifying. Most hospitals have made protocols on protecting pregnant women during delivery; like-rescheduling or canceling elective surgeries, moving many procedures and visits out of the hospital setting and into outpatient facilities, evaluating possible COVID-19 patients in an isolated area, separating known or suspected COVID-19 patients from other patients limiting their visitors; checking visitors for symptoms of possible COVID-19 infection, and identifying dedicated staff to care for COVID-19 patients. To avoid the risk of getting infected through health care workers, efforts have been made to limit the number of staffs who are exposed to these patients; nurses, doctors and hospital workers are checked for symptoms of possible COVID-19 infection when they come to work and health workers need to stay at home if they are ill.[6]

If any patient has to deliver a baby while suspected or known to be infected with COVID-19, the CDC recommends isolation and separation from the baby until recovery, to avoid infecting the newborn. Breast milk can be expressed and provided to the baby, as there is no evidence of the presence of the virus in breastmilk of infected mothers.[7]

The best way to prevent infection with COVID-19 during pregnancy is to decrease the chances of being exposed to the virus. The WHO recommends basic hygiene practices which include regularly washing of hands with soap and water, covering mouth with an elbow while sneezing or coughing, maintaining a "social distance" of at least 1.8 meters (six feet) from others; avoiding unnecessary and unprotected contact with suspected COVID-19 patients, and washing hands thoroughly after any contact.[8] To help pregnant women avoid any contact with others, communications via telephone or video conference (telemedicine) should be encouraged.

It is important for health care providers to stay up to date with new evidences on COVID-19, as new information are released everyday. As a practicing obstetrician, although limited, less severity of disease and minimal complications are the information that can be shared with anxious pregnant patients to comfort them.

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